CALIFORNIA SCHOOLS

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THE COVER PICTURE shows the new electronic data processing unit of the California State Department of Education—the RCA 301 Computer. The components, left to right, are the processor, tape group, card punch, printer, and card reader.

The Bureau of Secondary Education has cosponsored a number of regional conferences on the teaching of secondary school mathematics during the past two years under funds made available through the National Defense Education Act. One of these conferences was held at Fresno State College, February 16-17, 1962, under the leadership of Lawrence E. Ecklund, Coordinator of Education, Office of the Fresno County Superintendent of Schools. The conference keynote speech, which is featured here, should be of timely interest to all those connected with the emerging mathematics program.

EMERGING PATTERNS IN MATHEMATICS

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May I begin by paraphrasing a question that has been kicked around a great deal these past few years: "Why can't Johnnie learn mathematics?" I consider it essential that Johnnie does learn mathematics! The impact of mathematics on our culture, both from a philosophical and practical point of view, is not to be underrated, even for those who have little innate mathematical ability. Mathematics is one of the most used tools for the collection and organization of knowledge, justifying its philosophical value. It is also one of the most important tools used to understand, explain, and predict happenings in the world of our sense impressions, including imagination, justifying its practical or scientific value. Many of our social concepts are quantitative in character or can be made so by statistical means, so that mathematics plays an essential role here too. It must be recognized, however, that mathematics is independent of our sense experiments; it is a creation of the mind, and depends a great deal upon mental experiments, thinking.

"Why can't Johnnie learn mathematics?" is a loaded question. It is based upon the premise that Johnnie can't learn mathematics. This I categorically deny. It may not be easy, but I am convinced by many recent tests that Johnnie can learn mathematics and that Johnnie has been learning mathematics. I do not wish to imply that *all* is well with our mathematics curriculum, but you who teach it have been doing a good job. The experiments that have been going on for the past few years in the so-called modern mathematics curriculum have as their objectives the improvement of the standards of achievement of both the student and the teacher. If you examine the materials published by the School Mathematics Study Group, the University of Illinois Committee on School Mathematics, the Ball State Teachers College group (Muncie,

Indiana), and the University of Maryland group, to mention only those that I know best, you will find, according to one survey, that about 85 percent of the material is traditional in the best sense of the word—worthy of continuance. The other 15 percent may be new or novel, concerned with new points of view, and adopted in order to increase our understanding of the old subject matter. This does not indicate any revolution in mathematics; rather an evolution. The processes of this change are still under way and will in all probability continue for at least a decade. If only 15 percent of the material is new or different, you must not expect any revolutionary changes in the achievement of students, but some evolution in their progress is to be expected.

Before I get down to the basic changes in mathematics of grades seven to twelve, let me cite my experiences with mathematics at the college level, and you may later draw your own analogies. Many, many years ago, when I started to college, students of engineering were just beginning to study the calculus. Many thought it couldn't be done, and that only the better schools of engineering should put the calculus in the curriculum as a required subject. Today, however, the schools of any standing, including the junior colleges, automatically expect students in the pre-engineering curriculum to study the calculus. Even the better high schools today offer courses in the calculus. Although various mathematical organizations have recommended against this practice as a general rule, they all concede that within a decade this will be a common and recommended practice.

A few years ago, the School of Business Administration at the University of California at Los Angeles, recognizing a lag of 30 years in the mathematical preparation of their students as compared with the London School of Economics, decided that all students in their school should study analytic geometry and the calculus. There were those who said it couldn't be done. I had a hand in this experiment as a textbook writer, and I am happy to report that we are now successfully teaching these subjects, with appropriately selected theory and applications, to all students in our School of Business Administration.

One other example—a few years ago, under the impact of high speed computers, the standard course in theory of equations was replaced in the better colleges by a course, still in the process of evolution, called "linear algebra." Again there were voices of dissent, but even a few years have demonstrated its feasibility and its desirability. Actually, some of the simpler and more important aspects of the subject, including vectors, matrices, and linear inequalities, are being introduced in high school advanced algebra and college algebra courses. Mathematics and the sciences are not static, and "change for the better" is the password for progress. I cite these examples so that if you say changes cannot be made for the better in the school curriculum, I must turn a deaf ear

to you. If you say that certain changes should not be made, I am willing to listen to reason, but not to inertial objections. "What was good enough for my father was good enough for me, and is good enough for my son," is not very convincing.

Let me return to mathematics at the junior and senior high school levels—grades seven to twelve—for this is the domain in which you are most interested and about which I have come prepared to speak. In the evolution which is taking place at these grades, under the guidance of different groups, there are emerging certain patterns of thought which are common, with variable emphases, to all modern mathematics curricula. I will discuss some of these emerging concepts under the subheadings of sets, logic, inequalities, integration of ideas, and learning patterns, and I will try to show how they play a role in both algebra (including arithmetic) and geometry at the high school level.

Sets

One of the most important yet primitive terms used in all branches of mathematics is "set." The very fact that it is referred to as a primitive term means that it is not defined. Yet we all have an intuitive or informal concept of what is meant. It is used intuitively, synonymous with "collection," "bunch," "flock," "pack," "group," "class," and similar words, although some of these words may have special connotations. A "nonempty set" is one or more or even an infinite number of distinguishable objects of our sense intuitions or of our intellect, to be conceived of as a "whole." It is this conception of the whole that gives importance to the term. In mathematics, as distinct from ordinary conversation, terms often have special meanings, and the term "set" is one good illustration. Perhaps you have had no formal training concerning the subjects of sets—neither did I—but there is nothing to be frightened about. The important concepts and terminology of set theory that are useful at the high school level are few and readily understood. These few concepts are probably familiar to you, even though never stated formally. "Belonging to a set," the "intersection of sets," and the "union of sets" comprise the complete list of essential ideas. Your comprehension does not depend on knowing or using the symbols for a set, { }; for belonging to a set, ε; for the intersection of sets, $\cap$, cap; and for the union of sets, $\cup$, cup. Like many other parts of mathematics, symbols are often very important and useful abbreviations, and when their use clarifies or simplifies a presentation, they should be used; otherwise they should be avoided. This assumes, of course, that you have made a reasonable effort to learn how to use them.

We say an element "belongs to a set" (or the set contains the element) if it can be distinguished from all other objects by some characteristics which in mathematics are usually stated explicitly. Perhaps the young child explained it best to his parents when he told them he

was studying sets in school and they asked him what that was? "I don't know," he replied, "all I know is that it either is or it ain't!" The "intersection" of two sets is itself a set, the set elements which belong to both sets, and the "union" of two sets is the set of elements belonging to either or both the sets. The "empty set" contains no elements.

Illustrations of such ideas are common in arithmetic, algebra, and geometry. They may not have been expressed in set language in the past, but that is not important. Since these notions of elementary set theory are universal, they become a unifying concept of all branches of mathematics at all levels, and this is important. From the very beginning we talk about the natural numbers, also called the counting numbers or positive integers, depending upon our progress in arithmetic and whether we think in terms of the sequence 1,2,3,4, . . . , or in terms of successors 1, $1 + 1 = 2$; $2 + 1 = 3$; $3 + 1 = 4$. The introduction of the term "set," so that we may think of numbers as a "whole" is a simple idea: the set of positive integers means little if anything more than "all the natural numbers." Since that little word "all" is often a source of confusion, it can be offset by introducing the undefined term "set." This has the advantage of laying the foundation for extension in many directions. It becomes very specific when we think about the set of positive integers, the set of negative integers, the set of integers, the set of fractions or rational numbers, and at higher levels of arithmetic, the set of real numbers, the set of complex numbers, or at even a higher level, the set of vectors (sets of numbers), and this may be done in two or three dimensions. In each case there are one or more characteristics which must be explicitly stated to determine whether or not an object of our intellect belongs to the set.

In mathematics we ask many questions and expect definite answers. Frequently the answer depends upon "guess what I am thinking of." The use of elementary set theory makes it possible to be much more explicit in our questions and state more precisely what we mean. If the question is asked while teaching the additive method of subtraction: "What added to 5 gives 8?", the expected answer is always "3." But if the question is: "What added to 8 gives 5?", the expected answer may be: "There is no such number" or "−3," depending upon what set of numbers you have in mind. "What positive integer added to 8 gives 5?" and "What integer added to 8 gives 5?" are different questions and have different answers. The introduction into arithmetic of the concept of sets of numbers has made it possible to be explicit in our questions and answers.

If we go a little higher in mathematics to the field of algebra, and write: Solve the equation $x^2 - 3x + 1 = 0$, the instructions are incomplete. The answer depends upon whether x belongs to the set of rational numbers, as it would have been interpreted by the early Greek philoso-

phers, or whether x belongs to the set of real numbers, so that irrational numbers are included.

Solve the equation $x^2 + x + 1 = 0$. The answer is the empty set or a set of two complex numbers, depending upon "what you are thinking of." It is true that in most textbooks you can usually but not always guess "what the author is thinking of," especially if you look at the answer book–but that isn't cricket. Today, modern texts are explicit, and ask such questions only when they specify the set of numbers to which x must belong. This is why the underlying pattern of arithmetic development emerging in modern arithmetic texts is a progressive discussion of the different sets of numbers of arithmetic–the natural numbers, the integers (positive, zero, negative), the rational numbers, and at higher levels, the real numbers, complex numbers, and vectors, considered as ordered pairs or triples. The notion of sets of numbers plays an extremely important role in modular arithmetic, considered at the school level as clock arithmetic or the periodicity of trigonometric ratios with respect to angular measure. The notion of the "solution set" of an equation or a set of equations plays a prominent role after appropriate restrictions have been imposed.

The notion of "set" is not limited to the study of algebra and arithmetic. It plays even a more dominant role in geometry–especially in informal geometry as it is being taught or soon will be taught in the junior high schools and even in the primary grades. In geometry, "belonging to a set," "intersection of sets," and the "union of sets," all become prominent because of their relation to our sense perceptions. These terms and their geometric interpretations play an important part in illustrating logical ideas, as in Venn diagrams. A line, a ray, a segment, an angle, and a circle are all thought of as sets of points, and the points belonging to any of these sets are distinguished from all other points by stating specific characteristic properties for each. The plane, half-plane, interior of an angle as the intersection of two half-planes, and the interior of a circle are sets of points, each of which may also be considered as a whole. It is only through the language of sets that we can avoid the past confusion (guess what I am thinking of) between such terms as "an angle and its interior," and "a circle and its interior," to mention only a few. The intersection of two lines is a set of points; and the intersection of a line and a circle or of a line and the interior of a circle are sets of points. Since we do not know a priori whether these sets contain any points, the empty set is a convenient mathematical convention. It is true that words such as "belongs" and "contains" can be and often are replaced by synonyms, as in the expressions, "a point lies on a line," and "a line passes through a point," but the specific terms, "belongs" and "contains" add unity to mathematical thinking and they are used at the most important places–in the postulates and

definitions. A triangle is the "union" of three noncollinear points and the three segments (considered as sets of points) that the three points determine. It is through the notions of elementary set theory that a triangle is distinguished from its interior, which is the intersection of three half-planes. These two definitions are not at all alike and are not a source of confusion. The older term "locus" is giving way to the term "set." A locus was characterized by its distinguishing properties, and that is just the property of a set. "The set of points equidistant from two points" suggests immediately that we seek those and only those points having this property—the need to prove a theorem and its converse. Let me repeat: the important concepts of elementary set theory are very easily grasped, and the use of these concepts is one of the emerging patterns of school mathematics to be found in all truly modern texts.

Logic

We have always recognized the logical character of mathematics. One of my colleagues, who is older and wiser than I am, claims that mathematics is merely a part of logic, and who am I to dispute this claim? In the past there was a tendency to look upon arithmetic and algebra as a mathematical discipline in which the techniques of computation and of solving equations were developed. It was only in geometry that we did logical thinking. Of course this is an exaggeration, but it contains more than a grain of truth. Even in geometry we did our logical thinking in accordance with well-memorized forms without clearly perceiving the ideas of logic inherent in our work. Euclid's *Elements* was once considered the pattern of excellence. Yet one of his early commentators, Pappus, circa 300 A.D., who more than anyone else propagandized this doctrine of "unsurpassed excellence," suggested a number of ways in which Euclid's *Elements* could be improved. Only recently have some of his ideas been incorporated in our texts, beginning with Birkhoff and Beatley's *Basic Geometry*, 1940, and very recently in the geometry texts of the School Mathematics Study Group, the University of Illinois Committee on School Mathematics, and in *Geometry* by Brumfiel, Eicholz and Shanks. One example is the modern way to prove the isosceles triangle theorem by setting up a one-to-one correspondence between the triangle and itself, considered as a set of points. This replaces Euclid's pons asinorum, or the frequently used angle-bisector method, both of which contain hidden and unstated assumptions.

Today definite patterns of logical ideas are emerging in both algebra and geometry. We are no longer fearful of recognizing that all logical developments depend upon clearly stated assumptions, and we recognize such statements in their true character. This is not only so for geometry but also for algebra. In the Twenty-third Year Book of the National Council of Teachers of Mathematics, C. B. Allendoerfer explains why

we should not wait until the study of geometry, but should begin in our study of algebra, including arithmetic, to develop logical ideas needed in the study of mathematics. The reason is that algebra is intrinsically simpler than geometry. For geometry, all the assumptions of algebra must be made, and then some more. Allendoerfer even recommends the study of some incomplete but simple algebraic systems to emphasize the logical ideas rather than the computational aspects of the subject.

We should have a clear understanding of the need for undefined terms and unproved statements, and an appreciation of the difference between postulates (call them axioms, assumptions, principles, if you will), and definitions. But more than that, we need to pay attention to the laws of logic as well as to the laws of mathematics if we are to understand what is meant by "proof." These laws of logic may either be postulates or theorems derived from them.

A modern text is much concerned with questions of "existence" and "uniqueness," as in the closure laws of arithmetic, or of additive or multiplicative inverse in algebra, or in the theory of parallel lines of geometry. A modern text is concerned with different isomorphic models representing the undefined objects and relations (1) in simple algebraic systems such as clock arithmetic; (2) in finite geometries; (3) in the relation of ordered number pairs and geometric vectors; and (4) in complex numbers and certain second-order matrices. A modern text discusses the laws of "contradiction," the "excluded" middle of Aristotelian logic, tables of truth values, and the essential difference between a statement (a declarative sentence assumed to be true or false but not both) and its "converse." It may even go further and discuss the "opposite" of the statement and the "logical equivalence" of the converse and the opposite, indicating that both terms are not really needed. Logic, too, has its special symbols, especially those for the words "not," "and," the inclusive "or," "implies," "if . . . , then . . . ," and others. It is not important that we use these special symbols, but it is important that we understand the basic ideas of logic before we can fully appreciate a logical proof.

In arithmetic and algebra we have been too prone to overlook the "Why?" and put down a succession of statements without appropriate connectives—"and," "or," "if . . . , then . . .". Because we paid little attention to logic, we really did not know whether we proved something or not—we merely obtained an answer. In geometry, we were prone to overemphasize "statement" and "reason" in a stilted two-column format. The Q.E.D. assumed unnatural proportions, and often on close examination it was found that our final statement—which was to be demonstrated—was not what we started out to prove. Sometimes in the "reason" column we put down statements without examining whether their hypotheses were satisfied or not—just so we gave a reason

(by number, because no one, we hoped, would go to the trouble of checking up on us). But a clear understanding of logical principles, especially the laws of contradiction and the excluded middle, shows us that such formality is often a poor way to present a proof, even if it is correct. Even Euclid did not fully appreciate this. He stumbled not only once, but a number of times. The cause was not the failure to understand the mathematical content but rather the logical content of his development. His parallel theory is a case in point. It is correct (or can be made so by supplying his tacit assumptions), but it is logically clumsy. It is only when we understand clearly the fundamental ideas of logic that a much simpler presentation becomes available, and this enables us to appreciate the underlying assumptions of his parallel theory. It took a Gauss, a Lobachevski, and a Bolyai, all independent discoverers of non-Euclidean geometry, to accomplish this end, 2,000 years after Euclid, despite the fact that Pappus had expressed some excellent ideas along this line.

Texts in arithmetic, algebra, and geometry with a modern point of view show conscious effort to develop systematically the basic ideas of logic. A number of high school teachers have remarked to me that the chapters in which these ideas are developed are often considered by students to be the most interesting part of a book. High school students are greatly interested in ideas, and often are more interested in ideas than in techniques. A word of caution is necessary. You may pay so much attention to the logical concepts involved in some statement that its mathematical content is entirely lost. This is especially true if logical symbolism is used too extensively. A new language, when overdone (and it is overdone in some of our experimental texts), is a source of confusion rather than enlightenment. The changes to be introduced should be of an evolutionary and not a revolutionary character. Many ideas about logic will appear in forthcoming texts and will be tried and found useful.

Inequalities

In the past we have given only lip service to the study of inequalities. Rarely did we stop to consider what we meant by positive, zero, and negative. The axioms of "equal" were often explicitly stated and understood, but the axioms of "inequality" were never carefully stated or they were not stated at all. Indeed the word "positive" was associated with the natural numbers and then used intuitively for other positive numbers. The necessary postulates are few and important: (1) the postulate of trichotomy—every real number is positive, zero, or negative; and (2) the postulate for positive numbers—the sum and product of two positive numbers is positive. From these the manipulative rules of inequalities can be derived. But if you prefer, these rules can be stated as further postulates. Such ideas are now emerging from modern texts. In the

past, about the only place of importance that I can recall where inequalities were mentioned was in connection with the discriminant of the quadratic equation. The solution of equations was paramount; the solution of inequalities was conspicuous by its absence. Just a few years ago I had a class of selected junior engineers. In the study of convergence of an infinite series, it was necessary to solve a relatively simple linear inequality involving absolute values and a logical notion of "either . . . or." None of the students could solve it except by trial and error, and then only after looking at the answer book. Of course in the test they would have no answer book, so I had to take time out to discuss material which now appears in all of our modern high school texts. Any good modern text on arithmetic, algebra, or geometry pays considerable attention to inequalities and their solution. To do this successfully requires an appreciation of elementary set theory concerning intersections and unions, the logical equivalents of "and" and "or," and the necessary manipulative skills.

Occasionally, in analytic geometry, little attention was paid to inequalities to get the sign right, when trying to find the bisector of an angle. It was alleged that this made the topic too difficult, so it was either starred, meaning "too hard" or "omit," or placed in the appendix, meaning "cut out." Today with the advent of the high-speed computing machine that handles 30 or more such inequations, simultaneous linear inequalities are used to solve practical problems of economics and business management. A dozen years ago you could scarcely find a handful of mathematicians who were well-versed in this. Today this subject has forced its way even into the lower grades, where a beginning is made, and into our modern texts on algebra and geometry. Euclid practically overlooked the whole topic of inequalities or accepted its consequences on a purely intuitive basis without logical justification. This is the source of Euclid's main mistakes: his incorrect (incomplete) proof of the theorem of the exterior angle, so necessary for his development of the theory of parallel lines; and his failure to recognize the necessity of considering the converse of the triangle inequality theorem, a statement that is not always true for geometries in which the direct theorem holds. A modern text in geometry should avoid both of these errors and pay considerable attention to inequalities. It is not possible to present a logical development of "between" or the "interior of an angle," for example, without such concepts, or to supply the missing links in the errors just mentioned. These concepts are also needed to reorganize Euclid's theory of parallels or to extend such a theory to non-Euclidean geometries.

Integration of Ideas

The suggested possibilities for unified mathematics through combinations of algebra and geometry, of plane and solid geometry, of analytic

geometry and calculus, are old suggestions. The analytic geometry of Descartes was just such a union of geometry and analysis, although the geometry was often sacrificed in favor of analysis. Many years ago, when I did my practice teaching at the University of Chicago High School, my supervisor was E. R. Breslich (I looked up the initials only to find that I hadn't forgotten), who a few years earlier had written a text on unified mathematics. But his text and the many that followed and those on analytic geometry and calculus now appearing at the college level are not unified in the best sense of the word. They are compartmentalized, and true integration is lacking. Textbooks are now emerging in algebra and geometry for the high school level that have true integration of ideas. The number line is used even in the early grades and throughout the secondary schools to aid in the understanding of the development of the number system. Then, in geometry, algebra is used to give a better and simpler presentation of geometry than in Euclidean geometry, and this presentation is based upon measurement with the graduated ruler and the protractor. This is how that 15 percent of new material (mentioned earlier) comes in; this is the true integration of algebra and geometry, which is now emerging in modern texts. Synthetic and analytic geometry are used to improve our understanding of algebra; and algebra, including coordinate geometry, as a special part of analytic geometry, is used to improve or expand our understanding of geometry. Geometries of the plane and of space have many analogies and do not always require independent treatments. Algebra and analysis point this out sharply.

In our modern junior and senior high school texts there is a breaking up or scattering of various topics throughout the curriculum. Repetition, with appropriate extension to new ideas, is common. The geometry course serves as the best example. Plane and solid geometry are considered together when the same idea applies to both; similar triangles and elementary trigonometry are considered together; coordinate geometry is used together with synthetic methods or alone to prove theorems of plane geometry in order to contrast analytic and synthetic methods. Both analytic geometry and synthetic geometry are used to introduce vector geometry. In the next course, advanced algebra, many of these topics appear again in expanded form. True integration is more evident in these high school texts than in college texts. If I may be permitted a digression, I know of no place where poorer courses in high school algebra and high school geometry are given than in some of our colleges. Recent texts written for such purposes are anything but modern according to any acceptable standard. The modern high school texts are really showing the way. If college text writers do not catch on with respect to both algebra and geometry, in a few years the high schools will send to the colleges students who know more about modern mathematics—sets, logic, inequalities, and the use of the most appropriate

method, whether algebraic or geometric—than do their untrained teachers, and such colleges had better look to their laurels.

Learning Patterns

Patterns of learning by rote and by pure memory are giving ground to other methods in our modern texts. The so-called discovery method is emerging, based upon individual experiments or a series of questions asked by the text, the teacher, or a teaching machine. It is still in the experimental state. We aren't all Max Bebermans nor can we imitate his enthusiasm and energy. But if we know the subject matter well enough beforehand, we can give much more attention to procedures than if we must act like beginning students. An informal presentation followed by a more or less formal development can play an important role in the teaching of both algebra and geometry. But wasting time on experimental discovery when the student already knows the outcome of the experiment is far from efficient. If our methods of teaching are adapted to various criteria, such as the learning speed of the student (there are no dull students I have been told, just retarded or slow learners), something must be sacrificed, say the amount of material covered. Modern texts and special materials adapted to teaching machines (unfortunately, programmed material based on modern texts is not yet available) are written so that students should be able to read them. Students may progress at different rates, but nowhere is the teacher needed more than to use his judgment so that we do not waste our resources and time. "Adaptability" is a key word with reference to some of our recent texts, but it is the teacher, not the student, who must be the final judge of how to compromise progress against understanding, mediocrity against efficiency.

Evaluation

In summary, let me recall that certain desirable patterns are emerging in the school mathematics program. These include the use of the notion of sets as a unifying principle throughout the program, and for clarifying the notions of variable, relations, and function, by means of sets or ordered pairs. A logically consistent exposition of school mathematics is desirable and is made possible by giving attention to the fundamental principles of logic. The laws and techniques related to inequalities take their place alongside of the laws and techniques related to equalities. Integration of ideas is evidenced by a breakup or scattering of certain topics throughout, accompanied by repetition of ideas embellished with their extensions. New approaches to the learning process are emphasized. Many of these ideas could be used with traditional materials, but they come to the fore only when new points of view are introduced into the curriculum. Students should understand the principles or basic concepts of mathematics as well as master the manipulative skills. The

results of testing programs for students using the newer texts have demonstrated that these objectives are not incompatible, but rather that they complement each other. The student needs to be led to discover generalizations of results based on limited experience, and to express these generalizations in his own words. Texts should be clear, concise, and unambiguous in the use of language, but this should not be expected of the learner.

Most teachers report much more interest and understanding from students who study modern materials than from those who study traditional materials. I have no doubt that this is due in part or whole to the enthusiasm of the teachers and the enthusiasm engendered by the teachers in the students. As far as I can find out, when any new program is taught reluctantly and under compulsion by a teacher often poorly prepared for the undertaking, the results are likely to be less satisfactory than the traditional course. But under such teachers, the results of the traditional course are also unsatisfactory. Such teachers may overcome this handicap through training. Every mathematics writing group believes strongly that teachers should be properly trained (self-training for the most capable; in-service training for others), to use their materials effectively. The conjecture that modern ideas are only for the better students has been contradicted by available data. No program will turn weak students (retarded learners, to you), into superior ones, but something new or radically different—a new point of view, a shift of emphasis, a teaching machine—may be a guide to increased effort and better accomplishment.

APPORTIONMENTS OF THE STATE SCHOOL FUND FOR THE FISCAL YEAR 1961-62

EDWIN H. HARPER, *Chief, Bureau of School Apportionments and Reports*
DOROTHY KIRSCHMAN, *School Apportionments Analyst*

The Constitution of the State of California provides that the State School Fund be not less than $180 per unit of average daily attendance and authorizes the use of an additional amount at the rate of $21.36 per unit of a.d.a. if needed to meet the requirements of formula computations prescribed in the law. The current total appropriation, based on the rate of $201.36 for each of the 3,562,681 units of a.d.a. in the public schools last year, is $717,381,446. Statutes enacted by the 1961 Legislature provide for a reduction in the amounts transferred from the General Fund—$5,000,000 for Tax Relief Grants and $2,059,890 to a Service Fund Surplus Account—a total of $7,059,890.

The current appropriation of $717,381,446, decreased by the reduction of $7,059,890 from the General Fund, makes $710,321,556 available to the State School Fund. Additional amounts of $11,873, (adjustment to prior year average daily attendance), allowances of $4,578,000 in the automobile driver training program, after adjustment, and $67,065 in special allowances for project-connected pupils result in a total of $714,978,494.

The separate State School Fund Apportionments for the 1961-62 fiscal year that were certified by the Superintendent of Public Instruction were the Principal Apportionment, the Special Purpose Apportionment, the State School Fund Apportionments, the First Period Apportionment for Growth, the Second Period Apportionment for Growth, and the Final Apportionment. Each of these apportionments, the date it was made, and the amount of the apportionment are shown in the following tabulation.

Apportionment	*Date*	*Amount*
Principal Apportionment	September 26, 1961	$627,671,980
Special Purpose Apportionment	December 11, 1961	46,393,138
State School Fund Apportionments	May 2, 1962	19,591
	June 25, 1962	150,733
Correction, Driver Training Allowance	May 17, 1962	*CR 552,000*
Refund from Los Angeles County by correction of First Period Apportionment for Growth	March 12, 1962	*CR 322,549*
First Period Apportionment for Growth	March 12, 1962	13,943,946
Second Period Apportionment for Growth	June 25, 1962	18,451,044
Final Apportionment	June 25, 1962	5,943,151
Total apportionments for fiscal year 1961-62		$711,699,034

The Principal Apportionment [1] of the State School Fund in an amount of $627,671,980, made on September 26, 1961, included Basic State Aid of $125 per unit of average daily attendance for each school district (not less than $2,400 for any school district), State Equalization Aid, allowances for adults, allowances for County School Tuition Funds, and allowances for County School Service Funds. The amount of Principal Apportionment less the total of three advanced payments in July, August, and September, was disbursed by the State Controller during the remaining nine months of the fiscal year, October, 1961 through June, 1962—one-tenth each month except February, two-tenths in February.

The Special Purpose Apportionment [2] in an amount of $46,393,138 was made on December 11, 1961. This apportionment included allowances for the excess expense of special education of physically handicapped and mentally retarded minors, for the transportation of certain physically handicapped and severely mentally retarded minors, for the excess expense of automobile driver training, for the transportation of pupils, and for project-connected pupils. The State Controller disbursed to the counties four-tenths of the Special Purpose Apportionment in December, 1961, and one-tenth in each of the remaining six months, January through June, 1962.

The separate State School Fund apportionments made on May 2, 1962 and June 25, 1962, amounted to $170,324. Of this, $107,827 was apportioned to school districts as a correction of a previous apportionment. The remainder, $62,497, was apportioned to the County School Service Funds on the basis of claims submitted by county superintendents of schools for the following purposes in the amounts shown:

Purpose	*Amount*
Emergency elementary schools for physically handicapped minors	$39,583
Individual instruction for physically handicapped pupils in secondary schools	2,722
Emergency elementary schools and special classes (secondary), and individual instruction for physically handicapped	17,527
Transportation costs for normal pupils attending elementary schools	163
Additional apportionments to school districts for current expense	750
Cooperative county publications	1,752
	$62,497

A refund of apportionment in the amount of $322,549 was received from Los Angeles County, March 12, 1962, for a correction of First Period Growth Apportionment.

[1] "Principal Apportionment of the State School Fund, 1961-62," *California Schools,* XXXII (December, 1961), 467-73.
The Principal Apportionment was set forth in detail in *Apportionment of the State School Fund for the Fiscal Year Ending June 30, 1962, Part I—Principal Apportionment.* Sacramento: California State Department of Education, December, 1961.

[2] "Special Purpose Apportionment of the State School Fund, 1961-62," *California Schools,* XXXIII (March, 1962), 93-97.
The Special Purpose Apportionment was set forth in detail in *Apportionment of the State School Fund for the Fiscal Year Ending June 30, 1962, Part II—Special Purpose Apportionment.* Sacramento: California State Department of Education, February, 1962.

The First Period Apportionment for Growth and the Second Period Apportionment for Growth in the school districts were made under the provisions of law [3] as enacted by the Statutes of 1961 (Chapter 887). The law provides that state support be an amount equal to the difference between (1) basic aid and equalization aid because of a.d.a. and assessed valuation of the preceding fiscal year, and (2) an amount computed on account of a.d.a. reported for the current period, using assessed valuation for the current year, the apportionment having been computed by subtracting the district aid from the foundation program. The difference is allowed the district for each period subject to the application of the following days maintained factor:

$$\frac{\text{days taught in first period}}{175} \quad \text{and} \quad \frac{\text{175 minus days taught in first period}}{175}$$

The law reserves an amount for apportionments for growth equal to $11.26 per unit of a.d.a. in the State School Fund. Of this amount, 40 percent is available by law for the First Period Apportionment for Growth, the remainder for the Second Period Apportionment for Growth. The total of the computed allowances for all districts for the first period and the second period was less than the amounts available; therefore no correction factors were applied. The number of school districts receiving allowances for growth, the average daily attendance attributed to growth, and the amounts apportioned for elementary schools, high schools, and junior colleges are shown in Table 1, page 336.

The total allowance for the First Period Apportionment for Growth was disbursed by the Controller in March, 1962, and the allowances for the Second Period Apportionment for Growth were disbursed in June, 1962.

The Final Apportionment for the fiscal year, in the amount of $5,943,151 was certified by the Superintendent of Public Instruction to the State Controller on June 25, 1962. Prior to the Final Apportionment, $8,892,611 remaining in the State General Fund was available for transfer to the State School Fund. As one part of the Final Apportionment, $5,613,151 of this remainder was apportioned under the provisions of Education Code Section 18460 to make up the deficit of the Special Purpose Apportionment as follows:

Source of deficit	*Amount of deficit*
Physically handicapped	$2,142,659
Mentally retarded	1,652,935
Severely mentally retarded	230,673
Transportation for certain exceptional pupils	460,781
Transportation of regular pupils	1,126,103
Total	$5,613,151

[3] The "first period" includes the number of full school months from July 1-December 31; the "second period," the number of full school months from the first day following the first period through April 15.

After the Final Apportionment, a balance of $3,279,460 remained. According to Education Code Section 18460 (b), enacted by the 1961 Legislature, any remaining balances shall remain in the General Fund and shall be made available to meet deficits in computed apportionments in subsequent fiscal years.

Table 1

NUMBER OF SCHOOL DISTRICTS GRANTED GROWTH APPORTIONMENTS, AVERAGE DAILY ATTENDANCE ATTRIBUTED TO GROWTH, AND AMOUNT OF APPORTIONMENTS FOR EACH LEVEL

For the Fiscal Year 1961-62

Level	First Period Apportionment for Growth			Second Period Apportionment for Growth		
	Number of districts granted apportionments[1]	Average daily attendance attributed to growth	Amount apportioned	Number of districts granted apportionments[1]	Average daily attendance attributed to growth	Amount apportioned
Elementary school	406	65,355	$6,243,177	416	112,861	$11,496,377
High school	192	70,860	5,261,778	152	65,109	6,133,814
Junior college	42	24,452	2,438,991	19	12,222	820,853
Total	640	160,667	$13,943,946	587	190,192	$18,451,044

[1] The formulas for computing growth apportionments (as required by law) were such that certain districts that had growth in average daily attendance did not share in the apportionment.

Included in the certification of the Final Apportionment was an amount of $330,000, which was made available to increase the allowance to school districts for pupils instructed in automobile driver training. An allowance of $4,800,000 for driver training was included in the Special Purpose Apportionment in December, 1961. In May, 1962, there was a reduction of apportionment in driver training in the amount of $552,000. The funds for automobile driver training are appropriated from the General Fund and are transferred to the State School Fund by the State Controller each fiscal year. This year, the amounts computed under the provisions of Education Code Section 17305 exceeded the amount in the Driver Training Penalty Assessment Fund in the State Treasury. The adjusted allowance for driver training this fiscal year was $4,578,000.

The following is a schedule of the payments from the State School Fund made by the State Controller to county treasurers that shows the amount paid each month and the percent each amount was of the State School Fund.

Date	*Amount*	*Percent*
July, 1961	$35,458,753.00	4.98
8 percent of Advance Apportionment		
August, 1961	70,917,505.00	9.96
16 percent of Advance Apportionment		
September, 1961	53,188,129.00	7.47
12 percent of Advance Apportionment		
October, 1961	46,810,759.30	6.58
One-tenth of the difference between Principal Apportionment ($627,671,980) and the three Advance Apportionments ($159,564,387)		
November, 1961	46,810,759.30	6.58
Same as explained for October		
December, 1961	65,368,014.50	9.19
Four-tenths of Special Purpose Apportionment ($18,557,255.20) plus the one-tenth difference explained for October ($46,810,759.30)		
January, 1962	51,450,073.10	7.23
One-tenth of the Special Purpose Apportionment ($4,639,313.80) plus the one-tenth difference explained for October ($46,810,759.30)		
February, 1962	98,260,832.40	13.81
Two-tenths of the difference explained for October ($93,621,518.60) plus one-tenth of Special Purpose Apportionment ($4,639,313.80)		
March, 1962	65,071,470.10	9.14
Same as explained for January plus the First Period Growth Apportionment ($13,943,946) minus refund of $322,549 from Los Angeles County by a correction of First Period Growth Apportionment		
April, 1962	51,450,073.10	7.23
Same as explained for January		
May, 1962	50,917,664.10	7.15
Same as explained for January plus State School Fund Apportionments for corrections, Education Code Section 17414 ($16,357) and for County School Service Fund Emergencies ($3,234) minus Correction to Apportionment in Driver Training ($552,000)		
June, 1962	75,995,001.10	10.68
Same as explained for January ($51,450,073.10) plus Second Period Growth Apportionment ($18,451,044) plus State School Fund Apportionment for corrections, Education Code Section 17414 ($91,470) and County School Service Fund Emergencies ($59,263) plus an Allowance for Driver Training ($330,000) plus Final Apportionment ($5,613,151)		
Total	$711,699,034.00	100.00

Table 2

SUMMARY OF ALL APPORTIONMENTS FROM THE STATE SCHOOL FUND

For the Fiscal Year 1961-62

Co. No.	Counties	Principal Apportionment September 29, 1961	Special Purpose Apportionment December 11, 1961	Growth Apportionments		Adjustments[1]	Apportionments to County Schools Service Funds for Emergencies May 2, 1962 and June 25, 1962	Decrease in Allowances for Pupils Instructed in Automobile Driver Training in the Special Purpose Apportionment June 25, 1962	Final Apportionment June 25, 1962 (for deficits in Special Purpose Apportionment)	Total Apportionments	Percent of increase or decrease 1961-62 as compared to 1960-61
				First Period March 12, 1962	Second Period June 25, 1962						
1	Alameda	$36,155,732	$1,818,013	$771,502	$984,597		$243	Cr $10,887	$259,042	$39,978,242	5.19
2	Alpine	11,138			191					11,329	—26.80
3	Amador	373,752	65,952	8,508	9,296			Cr 32	3,391	460,867	—3.45
4	Butte	3,683,935	352,952	71,744	92,256		106	Cr 846	22,846	4,222,993	6.32
5	Calaveras	368,067	93,896					Cr 59	1,900	463,804	—11.08
6	Colusa	445,167	33,697	746			7,208	Cr 235	3,580	490,163	—7.81
7	Contra Costa	21,790,517	1,392,581	332,399	459,229			Cr 10,256	130,652	24,095,122	3.57
8	Del Norte	858,979	112,154	10,582	5,862				2,710	990,287	0.17
9	El Dorado	1,157,605	180,587	20,092	30,035			Cr 481	10,120	1,397,958	1.45
10	Fresno	19,449,482	1,518,672	167,279	148,224			Cr 5,202	126,413	21,404,868	—1.33
11	Glenn	870,686	67,079					Cr 311	6,336	943,790	4.22
12	Humboldt	4,847,087	505,442	63,061	58,855		374	Cr 1,329	30,511	5,504,001	—5.95
13	Imperial	3,788,808	214,664	33,622	135,641		6,863	Cr 1,563	19,130	4,197,165	3.84
14	Inyo	470,608	44,084	6,917	11,276		163	Cr 186	2,330	535,192	—9.58
15	Kern	14,853,375	1,179,583	306,980	333,040		1,039	Cr 1,508	129,964	16,802,473	2.50
16	Kings	2,494,163	283,377	83,178	147,437			Cr 1,136	27,415	3,034,434	8.20
17	Lake	515,427	58,651					Cr 77	2,869	576,870	—5.95
18	Lassen	813,301	51,624	28,921	42,828		315	Cr 266	1,309	938,032	—2.03
19	Los Angeles	209,783,815	15,068,568	3,793,896	5,011,447	Cr $231,079		Cr 70,994	2,348,747	235,704,400	5.28
20	Madera	2,103,739	263,886	506	799			Cr 485	16,027	2,384,472	—6.68

21	Marin	5,593,342	392,731	165,579	225,065		10,622	Cr	2,087	46,085	6,431,337	3.88
22	Mariposa	154,176	57,363					Cr	103	440	211,876	—6.12
23	Mendocino	2,328,220	308,277	35,992	38,680			Cr	616	9,460	2,720,013	—3.33
24	Merced	4,504,210	493,844	62,318	57,660			Cr	1,216	32,032	5,148,848	2.73
25	Modoc	350,435	41,463	6,095	5,889			Cr	171	1,679	405,390	—14.80
26	Mono	78,678	21,418							1,645	101,741	—5.28
27	Monterey	7,780,107	526,925	201,404	229,315			Cr	3,449	56,461	8,790,763	1.98
28	Napa	2,668,500	189,028	73,734	89,271			Cr	1,475	17,356	3,036,414	10.32
29	Nevada	771,799	97,751	13,314	18,175			Cr	193	4,575	905,421	4.07
30	Orange	34,331,578	1,967,189	2,203,454	3,218,512		83	Cr	14,799	253,286	41,959,303	13.82
31	Placer	2,683,285	269,652	109,401	114,000			Cr	1,031	14,744	3,190,051	5.11
32	Plumas	381,202	55,921					Cr	276	3,613	440,460	0.07
33	Riverside	12,279,801	983,627	246,536	376,415			Cr	7,123	92,119	13,971,375	2.24
34	Sacramento	25,195,790	1,852,608	665,490	697,182		160	Cr	7,721	195,934	28,599,443	4.95
35	San Benito	570,311	67,209	16				Cr	258	6,184	643,462	—7.16
36	San Bernardino	23,217,380	1,899,644	253,391	306,610		11,838	Cr	9,359	197,625	25,877,129	2.50
37	San Diego	42,853,480	2,979,417	1,068,944	1,295,273		204	Cr	11,563	355,284	48,541,039	5.15
38	San Francisco	13,012,197	1,489,760					Cr	6,177	223,006	14,718,786	2.31
39	San Joaquin	11,181,299	769,234	187,942	144,067		267	Cr	4,785	83,705	12,361,729	3.01
40	San Luis Obispo	3,245,381	379,930	58,374	116,815			Cr	885	27,822	3,827,437	4.18
41	San Mateo	16,990,426	968,406	157,010	190,022			Cr	7,569	131,965	18,430,260	2.01
42	Santa Barbara	6,510,095	512,609	230,088	464,633			Cr	2,199	59,886	7,775,112	11.91
43	Santa Clara	31,101,765	2,098,207	1,043,143	1,786,455			Cr	13,208	236,825	36,253,187	9.58
44	Santa Cruz	2,959,768	357,184	62,305	84,035	16,357		Cr	1,557	38,696	3,516,788	4.93
45	Shasta	3,407,567	357,274	98,093	80,344		750	Cr	1,501	17,762	3,960,289	0.40
46	Sierra	178,036	20,705				451			286	199,478	—1.85
47	Siskiyou	1,633,511	189,147	17,766	19,560			Cr	401	6,065	1,865,648	—19.27
48	Solano	6,516,486	256,648	211,509	178,416			Cr	2,271	30,280	7,191,068	5.18
49	Sonoma	6,720,576	586,600	266,709	292,590		2,359	Cr	2,027	42,794	7,909,601	5.76
50	Stanislaus	8,348,441	677,949	169,494	86,101			Cr	3,469	64,302	9,342,818	—2.34
51	Sutter	1,484,079	78,395	11,337	11,991			Cr	614	9,795	1,594,983	—2.90
52	Tehama	1,069,180	135,357	23,723	30,030			Cr	660	6,256	1,263,886	—7.96
53	Trinity	486,236	113,268	11,502	3,171			Cr	170	1,151	615,158	—6.42
54	Tulare	8,674,408	879,883	123,374	86,303			Cr	3,011	82,064	9,843,021	2.52
55	Tuolumne	632,316	79,298	2,115	3,264			Cr	321	3,198	719,870	—0.92
56	Ventura	8,404,190	638,804	319,011	557,051		1,925	Cr	3,000	84,217	10,002,198	9.60
57	Yolo	2,735,735	176,025	34,108	35,667		17,527	Cr	882	19,350	3,017,530	—3.22
58	Yuba	1,802,611	118,926	110,742	137,469					9,912	2,179,660	2.69
	Totals	$627,671,980	$46,393,138	$13,943,946	$18,451,044	Cr $214,722	$62,497	Cr	$222,000	$5,613,151	$711,699,034	4.65

[1] Adjustments under the provisions of Education Code Section 17414: $16,357 to Santa Cruz County, May 2, 1962; $91,470 to Los Angeles County, June 25, 1962; and a refund of $322,549 from Los Angeles County by a correction of First Period Growth Apportionment.

A summary of all apportionments from the State School Fund during the fiscal year 1961-62, by counties, which is presented in Table 2 (pages 338-39), also shows the percent of increase or decrease for each county in the total of the several apportionments for the fiscal year 1961-62 over the corresponding total of apportionments for the fiscal year 1960-61.

Estimates of the portion of the State School Fund to be disbursed each month during the fiscal year were presented in the December, 1961, issue of *California Schools*.[4]

[4] "Principal Apportionment of the State School Fund, 1961-62," *California Schools*, XXXII (December, 1961), 467-73.

CHINESE LANGUAGE INSTRUCTION IN CALIFORNIA PUBLIC SCHOOLS[1]

Chinese language instruction in California public schools has been given impetus and direction during the 1961-1962 year by the organization of an Advisory Committee which has held three meetings and has produced the following five working papers: (1) Position Statement; (2) Qualifications of California Public School Teachers of Chinese; (3) Curriculum for Chinese Language Teacher Training; (4) Four Sequences of Chinese Courses; and (5) A Plan for a Year's Training Abroad. These papers constitute the main guidelines for the future endeavors of the Advisory Committee, which will continue to hold sessions during the current year to complete the work which they have undertaken.

The five working papers which have been formulated to date follow.

Position Statement

Recent world events have brought into sharp focus the need for America to balance the emphases in education between Western and Afro-Asian cultures. Among the Afro-Asian cultures, the culture of China has particularly drawn the attention of the educators. American leaders recognize the practical necessity and intellectual value of studying the experience of one-fourth of mankind who have tried to live together wisely and peaceably for over 3,000 years. The leaders of the nation realize that the Chinese language is a door to the minds of all people in eastern Asia, the basis for the written languages of 90 million Japanese and 30 million Koreans, and a decisive influence on all the languages of Southeast Asia. Consequently, Chinese is listed among the six critical languages to be given top priority in the foreign language development program under the National Defense Education Act of 1958.

The forward-looking leaders of the State of California also recognize the importance of foreign languages and the need for students to start learning them early in their schooling. Section 7604 of the Education Code, which requires the teaching of foreign languages in grades six through eight of elementary schools by 1965, shows the California Legislature's interest in having students learn languages. Members of the Advisory Committee on Chinese Language Instruction in California

[1] This report was prepared by the following members of the Advisory Committee for Chinese Language Instruction in California Public Schools: Kai-yu Hsu, Head of the Foreign Language Department, San Francisco State College, *Chairman*; Shau Wing Chan, Head, Department of Asian Languages, Stanford University; Theodore Chen, Head, Department of Asian Studies, University of Southern California; George Strem, Head, Foreign Language Department, Chico State College; Henry Yang, Research Associate, Chinese Instructional Materials Development Project, San Francisco State College; Richard M. Clowes, Associate Superintendent and Chief, Division of Instruction, California State Department of Education; Frank B. Lindsay, Chief, Bureau of Secondary Education, California State Department of Education; and Everett V. O'Rourke, Consultant, Bureau of Secondary Education, California State Department of Education.

Public Schools are in agreement with the statements on foreign language teaching and learning expressed in the Education Code and in the article, "Principles, Policies, and Recommendations for Foreign Language Instruction in California Schools," [2] which outlines the program that will be offered. But neither the Education Code nor the article (in contrast with NDEA policy statements), specifies the immediate need to include Chinese among the foreign language programs. The Advisory Committee therefore takes the following position in relation to this need.

We believe that it is necessary and feasible to start teaching Chinese in California public schools. First, the geographic location of California makes our state the nation's gateway to Asia. If California, soon to have the largest state population in the country, and with its historical and sociological relation to the Orient, does not take the lead in improving understanding among the peoples of the Pacific community, which state shall? Secondly, as critical needs for foreign language skills are felt throughout the nation by the federal government, the armed services, and private industry, the need for knowledge of Asian languages is felt more keenly by business and industrial institutions in California than by their counterparts in any other state. Thirdly, although Chinese until very recently was considered an exotic language, taught rarely and by a handful of specialists, even at the college level, this regrettable situation has now changed. Over 60 American universities and colleges, 13 of which are in California,[3] now offer undergraduate programs in the study of Chinese. Because the number of such programs is constantly increasing, students who start their Chinese language training in the public schools will be able to continue their language study at the college level. Furthermore, and this is of even greater significance, virtually all the American institutions of higher learning which confer the doctoral degree accept Chinese now on an equal footing with other foreign languages for fulfilling the language requirements.

There are other factors favorable to the development of Chinese language instruction in California public schools. The first summer foreign language institute ever organized under NDEA auspices to train Chinese language teachers was held in California in 1961, and five of the institute participants are currently teaching Chinese in this state. During the summer of 1962, one of only two similar institutes was again held in California. The first and only NDEA project to develop effective instructional material in Chinese for use in the public schools has been granted to a California institution, and the project has an initial draft of the materials ready for pilot testing for the 1962 fall term. California

[2] "Principles, Policies, and Recommendations for Foreign Language Instruction in California Schools," *California Schools*, XXXIII (February, 1962), 37-47.

[3] American Academy of Asian Studies (San Francisco); Claremont Graduate School; Long Beach City College; Los Angeles City College; Monterey Peninsula College; Pasadena City College; Pomona College; San Francisco State College; Stanford University; University of California, Berkeley; University of California, Los Angeles; University of the Pacific; and University of Southern California.

public schools have already expressed greater interest in Chinese language instruction than public schools in all the other states, except Hawaii. Of the elementary and secondary schools known to be offering Chinese instruction in the spring of 1962, five were in California. This fall, at least three more public schools will start Chinese language programs in California; six new programs will begin in Massachusetts; 15 reportedly will start in New Jersey; and a few will begin in Illinois and other states.

The conditions essential to beginning the development of Chinese language instruction in California public schools are all present—the number of teachers who are prepared to teach Chinese is growing, effective instructional materials specifically designed for this purpose will soon be available, and there is considerable public interest as well as support from public school administrators. At least one national foundation which has been financing experiments to develop instruction in neglected languages in secondary schools elsewhere, is giving California public schools substantial help in this field.

At the first meeting of the Advisory Committee on February 8-9, 1962, a course of action was outlined which included the following four main tasks:

1. Preparation of an outline of a public school Chinese language curriculum with four sequences: for grades six through twelve, seven through twelve, eight through twelve, and nine through twelve
2. Formulation of plans to prepare instructional materials according to the master curriculum
3. Formulation of criteria for measuring the competence of Chinese language teachers in public schools
4. Formulation of plans for programs to train teachers and others in Chinese language usage

The tasks of preparing and formulating these plans will occupy the attention of the Advisory Committee for some time. In the meantime, the Advisory Committee requests that the State Department of Education and other agencies concerned with the success of such a program bring to the attention of teacher education institutions in California the importance of providing specifically for educating teachers of the Chinese language. In its effort to carry out these tasks to successful completion, the Advisory Committee invites suggestions from all, particularly the teacher education institutions, as success will depend largely upon the preparation of qualified teachers.

Support and cooperation are solicited in order to develop an effective Chinese language program and to prepare qualified teachers for participation in this program.

Statement on the Qualifications of California Public School Teachers of the Chinese Language

Generally, the Advisory Committee on Chinese Language Instruction in California Public Schools supports the principles stated in a report[4] of the Committee on the Qualifications of Foreign Language Teachers of the Northeast Conference on the Teaching of Foreign Languages, which met in August, 1954. This report states that a public school teacher of foreign language must have (1) character and personality befitting the best public school teacher; (2) a well-balanced liberal education and a thorough knowledge of American culture; (3) considerable oral facility in and good pronunciation of the foreign language; (4) systematic knowledge of the grammar and syntax of the foreign language and an acquaintance with descriptive linguistics; (5) basic knowledge of the foreign country, its geography, politics, economics, religion, and social structure; (6) knowledge of the principles and methods of education; and (7) good command of foreign language teaching methods.

Specifically, the Advisory Committee subscribes to the following seven-point teacher qualification statement, which was prepared by the Steering Committee of the Foreign Language Program of the Modern Language Association of America in 1959, and was subsequently endorsed by 17 national and regional associations in the foreign language field:

QUALIFICATIONS FOR SECONDARY-SCHOOL TEACHERS OF MODERN FOREIGN LANGUAGES

1. Aural Understanding

   Minimal: The ability to get the sense of what an educated native says when he is enunciating carefully and speaking simply on a general subject.

   Good: The ability to understand conversation at average tempo, lectures, and news broadcasts.

   Superior: The ability to follow closely and with ease all types of standard speech, such as rapid or group conversation, plays, and movies.

   Test: These abilities can be tested by dictation, by the Listening Comprehension Tests of the College Entrance Examination Board—thus far developed for French, German, and Spanish—or by similar tests for these and other languages, with an extension in range and difficulty for the superior level.

2. Speaking

   Minimal: The ability to talk on prepared topics (*e.g.*, for classroom situations) without obvious faltering, and to use the common expressions needed for getting around in the foreign country, speaking with a pronunciation readily understandable to a native.

   Good: The ability to talk with a native without making glaring mistakes, and with a command of vocabulary and syntax sufficient to express one's thoughts in sustained conversation. This implies speech at normal speed with a good pronunciation and intonation.

[4] Stephen A. Freeman, et al. "The Qualifications of Foreign Language Teachers," *School and Society*, LXXX (November 27, 1954), 165-68.

Superior: The ability to approximate native speech in vocabulary, intonation, and pronunciation (*e.g.*, the ability to exchange ideas and to be at ease in social situations).

Test: For the present, this ability has to be tested by interview, or by a recorded set of questions with a blank disc or tape for recording answers.

3. READING

Minimal: The ability to grasp directly (*i.e.*, without translating) the meaning of simple, non-technical prose, except for an occasional word.

Good: The ability to read, with immediate comprehension, prose and verse of average difficulty and mature content.

Superior: The ability to read, almost as easily as in English, material of considerable difficulty, such as essays and literary criticism.

Test: These abilities can be tested by a graded series of timed reading passages, with comprehension questions and multiple-choice or free-response answers.

4. WRITING

Minimal: The ability to write correctly sentences or paragraphs such as would be developed orally for classroom situations, and the ability to write a short, simple letter.

Good: The ability to write a simple "free composition" with clarity and correctness in vocabulary, idiom, and syntax.

Superior: The ability to write on a variety of subjects with idiomatic naturalness, ease of expression, and some feeling for the style of the language.

Test: These abilities can be tested by multiple-choice syntax items, dictations, translation of English sentences or paragraphs, and a controlled letter or free composition.

5. LANGUAGE ANALYSIS

Minimal: A working command of the sound-patterns and grammar-patterns of the foreign language, and a knowledge of its main differences from English.

Good: A basic knowledge of the historical development and present characteristics of the language, and an awareness of the difference between the language as spoken and as written.

Superior: Ability to apply knowledge of descriptive, comparative, and historical linguistics to the language-teaching situation.

Test: Such information and insight can be tested for levels 1 and 2 by multiple-choice and free-response items on pronunciation, intonation patterns, and syntax; for levels 2 and 3, items on philology and descriptive linguistics.

6. CULTURE

Minimal: An awareness of language as an essential element among the learned and shared experiences that combine to form a particular culture, and a rudimentary knowledge of the geography, history, literature, art, social customs, and contemporary civilization of the foreign people.

Good: Firsthand knowledge of some literary masterpieces, an understanding of the principal ways in which the foreign culture resembles and differs from our own, and possession of an organized body of information on the foreign people and their civilization.

Superior: An enlightened understanding of the foreign people and their culture, achieved through personal contact, preferably by travel and residence abroad, through study of systematic descriptions of the foreign culture, and through study of literature and the arts.

Test: Such information and insight can be tested by multiple-choice literary and cultural acquaintance tests for levels 1 and 2; for level 3, written comments on passages of prose or poetry that discuss or reveal significant aspects of the foreign culture.

7. PROFESSIONAL PREPARATION

Minimal: Some knowledge of effective methods and techniques of language teaching.

Good: The ability to apply knowledge of methods and techniques to the teaching situation (*e.g.*, audio-visual techniques) and to relate one's teaching of the language to other areas of the curriculum.

Superior: A mastery of recognized teaching methods, and the ability to experiment with and evaluate new methods and techniques.

Test: Such knowledge and ability can be tested by multiple-choice answers to questions on pedagogy and language-teaching methods, plus written comment on language-teaching situations.[8]

The Advisory Committee considers the level described in this statement as "good" in 1959, as the current "minimal" desirable achievement of a public school teacher of foreign languages.

STATEMENT ON A CURRICULUM FOR TRAINING PUBLIC SCHOOL TEACHERS OF THE CHINESE LANGUAGE

The Advisory Committee on Chinese Language Instruction in California Public Schools suggests that the following curriculum components be considered essential to the training of qualified teachers for a Chinese language instruction program:

A. *Language Training*

A minimum of 750 college-level classroom contact hours of language training or its equivalent, leading to:

1. Fluent kuo-yu (Mandarin) speech, and thorough knowledge of and the ability to use at least 3,000 Chinese characters in reading and writing
2. Familiarity with the major works of modern Chinese literature (twentieth century and late nineteenth century)
3. Command of modern Chinese phonetics and syntax
4. Ability to read newspaper Chinese with ease; some familiarity with the classical style of writing

B. *Methodology*

1. Knowledge of and the ability to use audio-visual and language laboratory training aids
2. Ability to structure and use pattern drills
3. Training in educational method and psychology as required by the California State Board of Education

C. *Cultural Training*

1. One year's residence in a Chinese-speaking area
2. A minimum of 180 college-level classroom contact hours of study

[8] "Modern Foreign Languages in the Comprehensive Secondary School: The 1958-59 Major Project of the NASSP Committee on Curriculum Planning and Development," *Bulletin of the National Association of Secondary-School Principals,* XLIII (September, 1959), 1-14.

in Chinese culture, or equivalent study (four semester courses of 3 units, each)

Proposed Curriculum for California Public School Students Beginning Chinese Study in the Sixth, Seventh, Eighth, or Ninth Grade

The proposed sequences for Chinese language study (pages 349-52), are based on the following assumptions adopted by the Advisory Committee:

1. The principle of audiolingual instruction is sound and the methods and approaches based on this principle are effective in the teaching and learning of foreign languages, Chinese being no exception. By audiolingual instruction it is not meant that the student is to learn speaking only, but rather that the student is to acquire a solid fundamental command of the foreign language without which the student's progress in learning the language will be difficult and slow. Audiolingual instruction enables the student not only to acquire fluency in speech but also to acquire proficiency in reading and writing a foreign language, rather than translating it into another language.

2. Based on the audiolingual principle, the process of constant reentry of the items is employed in structuring the Chinese language curriculum. The entire sequence is devoted to this process. It is believed that at the end of the proposed sequence, the student will be able to progress satisfactorily toward mastery of the language.

3. The number of self-independent compounds that a given number of Chinese morphemes can make is uncertain, but a general rule of thumb is about 200-250 compounds per 100 morphemes. The most basic, hence most versatile morphemes, introduced at the beginning, will undoubtedly produce this ratio, but the relatively less basic morphemes will yield fewer compounds. The pattern will become extremely irregular beyond the first 1,500 basic morphemes.

4. Although the amounts of vocabulary and basic grammar taught in a longer sequence seem to differ very little from those in a shorter sequence, the period of exposure given in the longer sequence enables students to acquire more proficiency in the four language skills and to improve their cultural understanding.

5. Reading and writing of Chinese characters should be learned simultaneously. It is true that at any given stage of the student's learning of the characters, he is likely to have vague acquaintance with more characters than those he can write, and vague acquaintance with a character does not mean that the character is really learned. However, the advantage of writing practice to reinforce character recognition must not be overlooked.

6. Mastery of basic vocabulary is essential. Experience has indicated that if the first 1,500 basic morphemes are really and truly "mastered," the student can then expand his vocabulary very rapidly.

7. Public school schedules for foreign language classes vary. The amount of material suggested for each level in the sequences for the different grades is based on the general practice of having three periods per week of about 20 minutes each in grades six, seven, and possibly even eight; and five periods per week of 50 minutes each in the higher grades.

8. The importance of avoiding the use of the bilingual dictionary is recognized. It is also recognized that at the present time there is no Chinese-Chinese dictionary that is suitable for use by the American public school student. In the proposed sequences, prior to the introduction of the use of the dictionary, all reading materials are edited and graded according to the vocabulary to be learned at the level it will be used. The amount of unedited material starts and increases after the use of the dictionary is introduced in the tenth grade; in the eleventh grade, if the student begins his course in the ninth grade.

9. In order to encourage students to develop their language proficiency for different career goals, supplementary courses will be designed to parallel the regular units of study for the eleventh and twelfth grades.

10. The use of romanization in the reading materials will decrease from about 85 percent at the beginning to about 20 percent at the tenth grade. As unedited reading materials increase, the use of romanization will decrease and will cease during the twelfth grade.

11. In structuring a detailed curriculum, the language must be organized into "learning units" of grammatical features and vocabulary blocks. The Chinese sentence patterns can be grouped and arranged according to their relative ease or complexity. Vocabulary can be grouped according to basic situations, always beginning with the most common situations. At a future date, the proposed curriculum will be expanded to include detailed "learning units" of the required type. For the time being, the number of morphemes and vocabulary items are suggested as an index of progression, to be supplemented by the types and levels of material deemed appropriate to each level.

12. The following chart of curriculum sequences shows the progression followed in expanding the curriculum. The chart also shows the percent of total time to be devoted to each of the different types of activities, the number of morphemes, the number of vocabulary items, and the number of characters. The vocabulary items include both simple morphemes and compounds. The parenthesized figures, which are cumulative, show the number of morphemes, vocabulary items, and characters to be acquired as each sequence progresses.

GRADE SIX THROUGH TWELVE SEQUENCE

Grade Six

Aural-Oral	85 percent of total time; 150 morphemes; 350 vocabulary items; pronunciation; dialogues
Reading	5 percent of total time; 100 characters; recitation; dialogues; songs
Grammar	5 percent of total time; word functions; 14 basic sentence patterns
Writing	5 percent of total time; filling blanks; sentence making

Grade Seven

Aural-Oral	80 percent of total time; 150 (300)* morphemes; 350 (700)* vocabulary items; pronunciation; dialogues
Reading	10 percent of total time; 100 (200)* characters; children's stories; dialogues; tales
Grammar	5 percent of total time; word combinations; sentence pattern variations
Writing	5 percent of total time; sentence making; series of sentences

Grade Eight

Aural-Oral	80 percent of total time; 200 (500)* morphemes; 300 (1,000)* vocabulary items; intonation; conversation
Reading	10 percent of total time; 150 (350)* characters; edited news stories, letters, travel stories
Grammar	5 percent of total time; summary of common sentence patterns; sentence-end expressions
Writing	5 percent of total time; short letters; tales; diaries

Grade Nine

Aural-Oral	75 percent of total time; 250 (750)* morphemes; 350 (1,350)* vocabulary items; conversation; news reports
Reading	10 percent of total time; 200 (550)* characters; edited modern prose; announcements; short articles on Chinese history
Grammar	5 percent of total time; idioms
Writing	10 percent of total time; travel stories; diaries

Grade Ten

Aural-Oral	60 percent of total time; 250 (1,000)* morphemes; 300 (1,650)* vocabulary items; discussion; speech; story telling
Reading	25 percent of total time; 200 (750)* characters; edited modern prose; edited stories; news reports; dictionary use
Grammar	5 percent of total time; discussion of common variations of writing styles
Writing	10 percent of total time; simple composition, 150 words; news stories; writing speeches

Grade Eleven

Aural-Oral	55 percent of total time; 250 (1,250) * morphemes; 300 (1,950) * vocabulary items; discussion; speech; story telling
Reading	25 percent of total time; 200 (950) * characters; plays; short stories; documents
Grammar	5 percent of total time; analysis of basic techniques of composition; literary particles (classical)
Writing	15 percent of total time; simple composition, 100 (250)* words; letters, literary particles exercise

Grade Twelve

Aural-Oral	50 percent of total time; 300 (1,550)* morphemes; 300 (2,250)* vocabulary items; speech; debate; conference; plays

Reading	30 percent of total time; 250 (1,200)* characters; poems; essays on Chinese culture; novels; edited classical prose
Grammar	5 percent of total time; classical Chinese syntax
Writing	15 percent of total time; composition, 100 (350)* words; basic rhetoric

GRADE SEVEN THROUGH TWELVE SEQUENCE

Grade Seven

Aural-Oral	85 percent of total time; 150 morphemes; 350 vocabulary items; pronunciation; dialogues
Reading	5 percent of total time; 100 characters; recitation; dialogues; songs
Grammar	5 percent of total time; word functions; 14 basic sentence patterns
Writing	5 percent of total time; filling blanks; sentence making

Grade Eight

Aural-Oral	80 percent of total time; 170 (320)* morphemes; 350 (700)* vocabulary items; intonation; dialogues
Reading	10 percent of total time; 150 (250)* characters; children's stories; dialogues; simple prose
Grammar	5 percent of total time; word combinations; sentence pattern variations; summary of sentence patterns
Writing	5 percent of total time; sentence making; series of sentences; simple accounts of daily life

Grade Nine

Aural-Oral	75 percent of total time; 250 (570)* morphemes; 350 (1,050)* vocabulary items; conversation
Reading	10 percent of total time; 200 (450)* characters; edited news stories; travel stories; letters; documents
Grammar	5 percent of total time; sentence-end expressions; idioms
Writing	10 percent of total time; short letters; tales; diaries

Grade Ten

Aural-Oral	65 percent of total time; 300 (870)* morphemes; 350 (1,400)* vocabulary items; news reporting; discussion
Reading	20 percent of total time; 230 (680)* characters; edited modern prose; historical stories; documents; dictionary
Grammar	5 percent of total time; common variations of styles
Writing	10 percent of total time; simple composition, 150 words; news summaries; travel stories

Grade Eleven

Aural-Oral	55 percent of total time; 300 (1,170)* morphemes; 350 (1,750)* vocabulary items; speech; debate
Reading	25 percent of total time; 230 (910)* characters; modern prose; short stories; plays; documents
Grammar	5 percent of total time; basic techniques of composition; basic literary particles
Writing	15 percent of total time; speech writing; composition, 100 (250)* words; literary particles exercise

Grade Twelve

Aural-Oral	50 percent of total time; 300 (1,470)* morphemes; 300 (2,050)* vocabulary items; meetings; plays
Reading	30 percent of total time; 250 (1,160)* characters; poems; essays on Chinese culture; documents; selected classical prose

Grammar	5 percent of total time; basic classical Chinese syntax
Writing	15 percent of total time; composition, 100 (350)* words; basic rhetoric

GRADE EIGHT THROUGH TWELVE SEQUENCE

Grade Eight

Aural-Oral	85 percent of total time; 170 morphemes; 350 vocabulary items; pronunciation; basic dialogues
Reading	5 percent of total time; 150 characters; recitation; dialogues; songs
Grammar	5 percent of total time; word functions; word combinations; 14 basic sentence patterns
Writing	5 percent of total time; filling blanks; sentence making; sentence series

Grade Nine

Aural-Oral	80 percent of total time; 250 (420)* morphemes; 450 (800)* vocabulary items; intonation; dialogues; conversation
Reading	10 percent of total time; 200 (350)* characters; edited prose; news stories; letters; travel stories
Grammar	5 percent of total time; sentence pattern variations; sentence pattern summary; sentence-end expressions
Writing	5 percent of total time; short letters; short accounts of daily life

Grade Ten

Aural-Oral	70 percent of total time; 300 (720)* morphemes; 500 (1,300)* vocabulary items; news reporting; story telling
Reading	15 percent of total time; 250 (600)* characters; edited prose; documents; historical tales; dictionary use
Grammar	5 percent of total time; idioms; common styles of writing
Writing	10 percent of total time; short composition, 150 words

Grade Eleven

Aural-Oral	60 percent of total time; 325 (1,045)* morphemes; 400 (1,700)* vocabulary items; speech; discussion; debate
Reading	20 percent of total time; 300 (900)* characters; modern prose; news stories; short stories; documents
Grammar	5 percent of total time; basic techniques of composition; basic classical Chinese particles
Writing	15 percent of total time; speech writing; classical Chinese particles exercise; composition, 100 (250)* words

Grade Twelve

Aural-Oral	50 percent of total time; 325 (1,370)* morphemes; 350 (2,050)* vocabulary items; meetings; plays
Reading	30 percent of total time; 250 (1,150)* characters; poems; essays on Chinese culture; documents; plays; classical prose
Grammar	5 percent of total time; basic classical Chinese syntax
Writing	15 percent of total time; composition, 100 (350)* words; basic rhetoric

GRADE NINE THROUGH TWELVE SEQUENCE

Grade Nine

Aural-Oral	85 percent of total time; 300 morphemes; 750 vocabulary items; basic dialogues; pronunciation
Reading	5 percent of total time; 160 characters; recitations; dialogues; songs and other edited materials

Grammar	5 percent of total time; word functions; 14 basic sentence patterns
Writing	5 percent of total time; sentence making; sentence series

GRADE TEN

Aural-Oral	75 percent of total time; 300 (600)* morphemes; 600 (1,350)* vocabulary items; dialogues; conversation; intonation
Reading	15 percent of total time; 250 (410)* characters; edited stories; news reports
Grammar	5 percent of total time; sentence pattern variations; idioms
Writing	5 percent of total time; composition, 150 words; accounts of daily life

GRADE ELEVEN

Aural-Oral	65 percent of total time; 300 (900)* morphemes; 400 (1,750)* vocabulary items; story telling; topical discussion
Reading	20 percent of total time; 300 (710)* characters; news stories; documents; essays on Chinese culture
Grammar	5 percent of total time; common styles of writing
Writing	10 percent of total time; composition, 100 (250)* words; essays on given themes

GRADE TWELVE

Aural-Oral	50 percent of total time; 300 (1,200)* morphemes; 300 (2,050)* vocabulary items; speech; plays; debates
Reading	30 percent of total time; 300 (1,010)* characters; poems; documents; news stories
Grammar	5 percent of total time; common stylistics and rhetoric in modern Chinese
Writing	15 percent of total time; composition, 100 (350)* words; essays

PLAN FOR THE ESTABLISHMENT OF A CHINESE STUDIES CENTER IN TAIWAN

It is assumed that the Chinese Studies Center will be a joint enterprise of the educational authorities in California and those in Taiwan.

A. *Purpose*

1. Development of and experience in the study of the different cultures of the world have pointed up the advantage of studying abroad. By going abroad to study the student is not only able to make rapid progress in his language training, but is also given the opportunity to understand the culture in depth. The proposed center is to serve this purpose.
2. The Center will provide opportunity for in-service or preservice teachers of the Chinese language to acquire the necessary qualification of at least one year abroad, as specified in the statement of the qualifications of the California public school teachers of the Chinese language (pages 346-47).
3. The Center can also serve students of other disciplines who desire and can benefit from a junior or senior year abroad. This is a subject currently arousing great interest in many universities and colleges in the United States. The California state col-

* All items in parentheses are cumulative totals.

leges are also making plans to arrange such centers in Europe and elsewhere.

B. *Qualifications of Applicants*

1. Preference will be given to those completing their professional preparation to become teachers of Chinese, but all advanced students seeking this type of educational experience, which they can use effectively in their future careers, may apply and will be considered. The Advisory Committee will serve as the selection committee to decide on the qualifications of the applicants in consultation with the latter's home institution advisers.

C. *Training Schedule*

1. The year's training will begin with two months of intensive language work in order to prepare the student for the second phase of the program.
2. The second phase of the program will consist of two semesters of study at a well-established collegiate institution in Taiwan. The student will enroll in such courses as are appropriate to his academic interest and discipline upon approval and advisement of his advisers at his home institution and at the Center. His curriculum will be supplemented by special programs organized at the Center. The regular courses he takes at the institution in Taiwan shall be the kind which his home institution recognizes for credit.
3. The third phase of the program will involve two months of travel and visit to different places in Taiwan and other conveniently located areas. The purpose of this phase of training is for the student to collect materials and make personal observations on a subject selected in advance. He will complete a written report of academic substance on this chosen subject upon his return to the United States. The report will constitute an important part of his permanent record of achievement as a result of this training program.

D. *Areas of Training Activities in Taiwan*

1. The language component
   a. There will be discussion groups of three or four students each, arranged according to their academic and career interests. Participation by Chinese students in these discussions will be arranged.
   b. Individual tutoring, for which materials will be selected on the basis of the student's interests, will be arranged.
   c. Cultural appreciation, through making use of Chinese art objects, antiques, and cultural activities, including theaters, will be offered.

d. Contests will be held in speech, debate, composition, and the like.

2. The academic field component
   a. The students will enroll in courses related to their own academic fields in Taiwan universities upon advisement.
   b. In addition, the students will also prepare oral and written reports in Chinese whenever so required by their instructors at the Center.

3. The cultural component
   a. The Center will arrange lectures in Chinese by specialists in the various aspects of Chinese culture and society—politics, economics, and artistic and intellectual expression.
   b. Field trips will be arranged to various activities of the Chinese people—weddings, funerals, festivals, and rituals.
   c. Visits to Chinese families will be made.
   d. Group discussions will be held in which Chinese teachers and students will be invited to participate.
   e. There will be opportunities for participation in Chinese cultural workshops on folk arts, music, and dance.

E. *Organization*

1. In California
   a. There will be an Advisory Committee which, after having completed the planning, will continue to function as a consultative body for the Center.
   b. A director will be selected as the principal executive officer to carry out the plans mapped out by the Advisory Committee.

2. In Taiwan
   a. An instructional committee will plan the details of implementing the policies adopted by the Advisory Committee.
   b. An associate director will be the immediate over-all supervisor located at the Center.
   c. A secretarial and administrative staff adequate for the Center operations will be established.
   d. An instructional staff will be planned in accordance with the enrollment at the Center.

F. *Financial and Operational Responsibilities*

1. The Chinese Ministry of Education or its subordinate agency will be responsible for arranging:
   a. The site for the Center
   b. Classroom and other basic facilities
   c. Permission for the Center students to enroll in Taiwan universities

d. Transportation for the students, both ways
e. Library resources
f. Scholarships
g. Travel and visits in Taiwan

2. The Center will be responsible for the following:
   a. Instructional plans, clearing each student's program through his home school
   b. Special instructional facilities such as language laboratories
   c. Salaries for the Center staff
   d. Regular operational cost
   e. Supervision of students
   f. Contact with all educational institutions involved in the Center operation
   g. Academic supervision
   h. Preparation of reports
   i. Preparation of instructional materials
   j. Staff recruiting, which will involve only the language staff, as the students will enroll in regular Taiwan universities for their academic subject studies
3. Financial aid to students
   a. Scholarships will be established by Chinese authorities
   b. Scholarships will be established by United States authorities
   c. Travel funds
   d. Medical insurance
4. Possible sources of financial support
   a. California state colleges
   b. Federal government (NDEA)
   c. Foundations
   d. Chinese government

Departmental Communications

OFFICE OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION

ROY E. SIMPSON, ***Superintendent***

APPOINTMENTS TO STAFF

JOHN G. CHURCH was appointed Consultant in Curriculum Development, Division of Instruction, July 1, 1962, to take the place of Dr. Browne who is on leave for a year. Dr. Church has been serving as Associate, Division of Educational Communications, New York State Education Department, Albany, New York, since 1960. His experience in the curriculum laboratory field also includes directing the library and audio-visual and curriculum laboratory at Westminster College, Salt Lake City, where he was Assistant Professor of Education, 1953-57; directing the curriculum laboratory at the University of Utah, where he was Consultant in the Bureau of Audio-Visual Education, 1957-58; and work with teachers and librarians at Florida State University, 1958, and at Eastern Washington State College, 1958-60, where he was Associate Professor of Education. Dr. Church received his doctor of philosophy degree from the University of Utah in 1957.

ALPHORETTA S. FISH was appointed Consultant, NDEA Administration, Bureau of National Defense Education Act Administration, August 1, 1962. Mrs. Fish has been teaching science methods and supervision at the University of California, Santa Barbara, since 1961. Her experience includes teaching at the University of Maryland from 1958 to 1961; at the Western Michigan University campus school from 1957 to 1958; at Bowling Green State University, Bowling Green, Ohio, 1956-57; and in public schools in Centerville, Pennsylvania, from 1953 to 1955. She received her bachelor of science degree from Edinboro State College, Pennsylvania, and her master of arts degree from Western Michigan University. She has done graduate work at the University of Maryland.

J. C. LEVENDOWSKI was appointed Researcher and Teacher Trainer, Bureau of Business Education, June 18, 1962. He has been serving as teacher-coordinator of the distributive education program at Tennyson High School, Hayward Union High School District, Hayward, California, since 1960. A native of Minnesota, he taught at De La Salle High School in Minneapolis prior to moving to California. Mr. Levendowski received his bachelor of arts degree, bachelor of science degree, and master of arts degree from the University of Minnesota.

ERVING F. METZGAR, JR., was appointed Consultant, NDEA Program Supervision, Bureau of National Defense Education Act Administration, August 1, 1962. Mr. Metzgar has been director of student activities at Diablo Valley College, Concord, since 1955, and taught biological sciences there from 1952 to 1955. He received his bachelor of arts degree from the University of California, Berkeley, and his master of arts degree from San Francisco State College.

ARTHUR E. PHELAN was appointed Consultant, Bureau of National Defense Education Act Administration, July 1, 1962. Dr. Phelan has been Principal of the Santa Paula Elementary School District, Santa Paula, California, since 1951. He received his doctor of education degree from the University of California, Los Angeles, in 1958.

JOSEPH P. RICE, JR., was appointed Consultant in the Education of the Mentally Gifted, Bureau of Elementary Education, June 25, 1962. Since 1960, Dr. Rice has been school psychologist for the Lompoc Unified School District, Lompoc, California. From 1958 to 1960 he was testing officer for Yuba College, Marysville, California, and from 1956 to 1958 he taught psychology at Fresno City College. He received his doctor of philosophy degree from the University of Connecticut in 1959.

GEORGE L. ROEHR returned from a year's leave of absence to resume his duties as Consultant in Secondary Education, Bureau of Secondary Education on August 1, 1962. He has been working at Stanford University on a doctoral dissertation.

For Your Information

STATE BOARD OF EDUCATION ACTIONS

The following actions were taken by the State Board of Education at its regular meeting held in San Francisco, July 27, 1962.

Approval of Proposals for School District Organization Changes

In accordance with the provisions of Chapter 9 of Division 5 of the Education Code (Section 3151), the Board approved the following proposal regarding a change in school district organization:

Formation of a unified school district in Kern County—A proposal by the Kern County Committee on School District Organization that an election be held to determine whether the voters in the territory comprising the Taft Union High School District wish to form a unified school district.

In accordance with the provisions of Chapter 9 of Division 5 of the Education Code (Sections 3251 and 3584), the Board approved the following proposal regarding a change in school district organization:

Formation of a unified school district in Riverside County—A proposal by the Riverside County Committee on School District Organization that an election be held to determine whether the voters in the territory comprising the Glen Avon, Pedley, Union Joint, and West Riverside elementary school districts wish to form a unified school district.

Changes in Rules and Regulations

School Semesters. The Board, acting under the authority of Education Code Sections 152 and 7700, repealed Section 84, amended Sections 96, 97, and 102, and added Section 101.1 to Title 5 of the California Administrative Code, relating to school semesters, to read as follows (effective September 8, 1962):

96. *Program of Studies in Secondary Schools and Daily Program.* (a) The governing board of each school district maintaining one or more secondary schools shall establish and maintain unified courses of study designed to fit the needs of pupils admitted to the school or schools of as many years in length as the grades maintained; and courses of instruction for the civic and liberal education of the citizens of the community.

(b) The State Department of Education shall approve the courses of study adopted by the governing board.

(c) The principal of each secondary school shall keep on file in the office of the school and shall leave for his successor the latest program of studies in such school and a statement of the requirements for graduation. He shall also keep on file and leave in the office of the school for his successor a daily program showing the subjects taught by each teacher and the hour at which each subject is offered.

97. (b) The governing board of the school district shall provide courses of instruction in the Constitution of the United States, and in American history, including the study of American institutions and ideals, and of the principles of state and local government established under the Constitution of this State, in length to conform to the provisions of Education Code Section 7700 in every junior high school, senior high school, and four-year high school; and in every junior college for at least three credit hours.

101.1. *Definition of a Semester Period and the Time Equivalent to a Semester Period.* In a junior high school or high school "semester period" and the time equivalent to a semester period mean one of the following:

(a) One period of 40 to 60 minutes of instructional time per week throughout one semester of no less than 17 weeks.

(b) A minimum of 12 clock hours of instructional time provided during the academic year or in a summer school.

102. (b) The governing board of a school district maintaining a four-year or senior high school shall grant a diploma of high school graduation for the completion of a course of study or curriculum which includes not less than 190 semester periods and not more than 240 semester periods of classroom instruction and supervised learning, including work experience.

(c) (4) Two credit hours in physical education earned at the rate of one-half credit per semester for a minimum of 120 minutes per week in directed physical education activities, except as a pupil may be exempted in accordance with Section 8162, Education Code; and . . .

System of Accounting and Reporting Expenditures and Income for Junior Colleges. The Board, acting under the authority of Education Code Sections 5719 and 5719.1, added Article 2 (Sections 3060 and 3061) to Subchapter 11 of Chapter 1 of Title 5 of the California Administrative Code, relating to a system of accounting and reporting of expenditures and income for junior colleges, to read as follows (effective September 8, 1962):

Article 2. System of Accounting and Reporting for Expenditures and Income of Junior Colleges

3060. *Accounting.* Accounting for expenditures and income for junior college purposes in junior college districts, high school districts, and unified districts maintaining junior colleges shall be in conformance with the methods and procedures prescribed in the *California School Accounting Manual,* a bulletin of the California State Department of Education.

3061. *Separate Annual Reports for Grades 13 and 14 and for Classes for Adults.* Each governing board of a district maintaining a junior college shall file an annual report of the direct expenses, indirect expenses, designated income, and general income, beginning with the fiscal year 1961-62, relating to grades 13 and 14, and an annual report of such expense and income relating to classes for adults. The reports shall be prepared in accordance with instructions prescribed by, and on forms furnished by, the Superintendent of Public Instruction.

Approval of Organizations for School District Membership

In accordance with Education Code Section 1131, the Board approved the following organizations for which membership may be paid from funds of school districts and/or offices of county superintendents of schools for 1962-63, 1963-64, and 1964-65, subject, however, to each organization notifying the Department of Education immediately, whenever there is a change in the bylaws, charter, constitution, or purposes of the organization, and subject further to withdrawal of approval by the State Board of Education at its discretion.

Approved for membership by schools and by county superintendents of schools

Association for Outdoor Education, Inc.

President: Jack L. Davidson
Secretary: Mrs. Marguerite Foucault
Headquarters address: 733½ Hope Street, Los Angeles 17, California

Association for Supervision and Curriculum Development, NEA
President: Chester D. Babcock
Executive-Secretary: Margaret Gill
Headquarters address: 1201 Sixteenth Street, N.W., Washington 6, D.C.

Bay Area Educational Research Service
Interim Chairman: Rex Turner
Interim Secretary-Treasurer: Charles Kenney
Headquarters address: 480 James Street, Redwood City, California

California Association of Adult Education Administrators
President: Louise W. Heyl
Secretary: William Johnston
Headquarters address: 225 West Las Tunas Drive, San Gabriel, California

California Small School Districts Association
President: Frederick Grundeman
Executive Secretary: Marguerite E. McLean
Headquarters address: P.O. Box 1626, Santa Rosa, California

Educational Television Research Association
President: Kenneth V. Hill
Secretary: Arnold Durlacher
Headquarters address: 1720 Oregon Street, Berkeley 3, California

Riverside County Elementary School Administrator's Association
President: James Rowe
Secretary: Bert Elliott
Headquarters address: Pedley Elementary School, 5871 Hudson Street, Riverside, California

Approved for membership by schools

Central California Junior College Association
President: Edward Simonsen
Secretary: Norman Zech
Headquarters address: 1801 Panorama Drive, Bakersfield, California

Granting of Credentials to Applicant Whose Previous Credentials Had Been Revoked

The Board approved the granting, subsequent to previous revocation, of a junior college credential to Frederic Joaquin Gavlin (birth date 9-11-20), provided he meets the health and current academic requirements therefor.

Order of Revocation Vacated

The Board restored (by vacation of its May 11, 1962 order of summary revocation as a result of court action), the credentials of Henry James Goldsmith (birth date 3-9-32).

Suspension of Credentials for Public School Service

In accordance with the provisions of Education Code Section 13201, the Board suspended for a period ending June 30, 1963, the general secondary credential and the secondary school administration credential issued to Barclay Walker (birth date 12-4-14).

Revocation of Credentials for Public School Service

The Board revoked the credentials, life diplomas, and other certification documents for public school service heretofore issued to the following persons:

Name	*Date of birth*	*Revocation effective*	*By authority of Education Code Section*
Brady, Forest Jesse	10-16-96	January 21, 1962	13205
Brailsford, George Irving	11- 1-22	July 27, 1962	13207
Caldwell, William Vernon	6-15-26	June 20, 1962	13205
Craig, Walter A.	10-17-27	June 21, 1962	13205
Desser, Carol Ann	2-27-34	June 26, 1962	13205
Economos, Theodore R.	12-25-19	June 6, 1962	13205
Hailparn, Muriel Pearl	10-22-17	June 29, 1962	13205 13206
Hon, Roy Charles, Sr.	9-11-24	June 5, 1962	13205 13207
Kosturick, Michael	7-20-17	July 27, 1962	13206
Muse, David Clarence	8- 3-31	July 27, 1962	13207
Princeotto, Ted, Jr.	4- 2-36	July 27, 1962	13202
Scheres, Natalie Kellman Ross	7-10-32	July 27, 1962	13207
Scholler, Eugene Ronald	8-15-35	June 17, 1962	13205
Snider, Wilmer Lee	6- 6-32	July 27, 1962	13207
Spencer, Joseph Bernard	7-30-16	July 27, 1962	13207
Webb, J. Edgar, a.k.a. Jesse Edgar Webb, a.k.a. Edgar Webb	7-11-29	June 29, 1962	13205

NATIONAL HIGH SCHOOL WRITING CONTEST

The twenty-eighth annual National High School Writing Contest sponsored by the Ladies Auxiliary to the Veterans of Foreign Wars of the United States has been announced for the 1962-63 school year. This year, in order to encourage student thinking about community service in relation to American ideals and principles, the subject of the contest is "What I Can Do for My Country."

Any public, private, or parochial high school student, grades nine through twelve, is eligible to compete in the contest. Awards will be given by both local and state auxiliary branches, and contestants who win first honors in state contests will be eligible for presentation to the national judges, who will select winners of the following awards: first prize, $1,000 and gold medal; second prize, $500 and gold medal; third prize, $250 and gold medal; fourth prize, $100 and gold medal; honorable mentions, ten prizes of $10 each, and ten prizes of $5 each. The deadline for entries in local or regional contests is March 15, 1963.

Folders which contain detailed information about the contest may be obtained from local auxiliary chairmen or from the national headquarters of the Ladies Auxiliary to the Veterans of Foreign Wars of the United States, Contest Department, 406 West 34th Street, Kansas City 11, Missouri.

CALENDAR OF EDUCATIONAL MEETINGS AND EVENTS, 1962-1963

The calendar of educational meetings and events for the current school year that is maintained in the office of the Superintendent of Public Instruction is published in *California Schools* to provide a convenient reference to those who may wish to attend the meetings or participate in the observation of holidays and anniversaries listed. Information about events of statewide or regional significance in the field of education has been supplied by the organizations concerned. Questions regarding the calendar, and correspondence regarding corrections or additions should be addressed to the Superintendent of Public Instruction.

Meetings of the cabinet of the Superintendent of Public Instruction are held on Monday of each week.

Conferences or meetings called by the Superintendent of Public Instruction are marked with asterisks.

CALENDAR OF EDUCATIONAL MEETINGS AND EVENTS, 1962-63

Date	*Organization and Meeting*	*Place*
September, 1962		
3	—Labor Day	
9	—Admission Day	
10–13	—California Congress of Parents and Teachers, Inc., State Board of Managers Meeting	San Francisco
13–15	—State Board of Education Meeting	Los Angeles
14–15	—California Elementary School Administrators Association, Northern Section Leadership Conference	Lake Tahoe
15	—California School Boards Association, Regions 8 and 9 Conference	Mission Inn, Riverside
19	—Audio-Visual Education Association of California, Southern Section Executive Board Meeting	San Diego
20	—California Committee on Fitness, Annual Conference	State Education Building, Sacramento
25	—*State Department of Education, Professional Staff Meeting	Sacramento
26–27	—Coordinating Council for Higher Education Meeting	San Francisco
28	—Audio-Visual Education Association of California, Executive Board Meeting	Disneyland Hotel, Anaheim
28–29	—California Elementary School Administrators Association, State Executive Board Meeting	Palo Alto
28–29	—California Association of Secondary School Administrators, Representative Council and Executive Board Meeting	Burlingame
29	—California School Food Service Association, State Executive Board Meeting	San Luis Obispo

Date	*Organization and Meeting*	*Place*
October, 1962		
4	—California School Boards Association, Region 7 Executive Committee Conference	Salinas
5–6	—California Elementary School Administrators Association, Southern, South Coast Section Leadership Conference	Big Bear Lake
5–7	—Delta Kappa Gamma, Executive Board Meeting	Disneyland Hotel, Anaheim
6	—Pacific Arts Association, Northern California Section, Fall Conference	College of Notre Dame, Belmont
11–12	—State Board of Education Meeting	Oceanside
11–13	—California Elementary School Administrators Association, Northern, North Coast Section Meeting, California Association for Supervision and Curriculum Development	Hoberg's
12	—Columbus Day	
14–20	—National Association for Retarded Children, Inc., Annual Convention	Hotel Morrison, Chicago, Illinois
15–16	—California Association of Secondary School Administrators, Articulation Conference and Executive Board Meeting	Burlingame
16–18	—*California Association of County Superintendents, Fall Conference	Sacramento
18–20	—California Speech and Hearing Association, Annual State Conference	Hacienda Hotel, Fresno
19–20	—California Elementary School Administrators Association, Central Section Meeting	Hot Springs
19–21	—Future Homemakers of America, State Meeting	Asilomar
20	—California Association for Childhood Education, Executive Board Meeting	Sacramento
20	—California Elementary School Administrators Association, South Coast Section Meeting	———
20	—Southern California Junior College Association, Fall Conference	Glendale College
20	—Elementary School Science Association, Northern California, Fall Conference	Chico State College
20–21	—California Aerospace Education Association, Inc., Board of Directors Meeting	Skyway House, Bakersfield
23	—*State Department of Education, Executive Staff Meeting	Sacramento
26–27	—Audio-Visual Education Association of California, South Section, Annual Conference and Executive Board Meeting	San Fernando Valley State College
27	—California Association of Teachers of Deaf and Hard of Hearing Children, Conference on Language Needs	California School for the Deaf, Riverside
27–30	—National Association of Public School Adult Educators, Annual Conference	Detroit, Michigan
29	—California Education Study Council Meeting	San Francisco
30–31	—Coordinating Council for Higher Education Meeting	Los Angeles
Oct. 30 to Nov. 2	—*California Junior College Association, Fall Conference	Hacienda Hotel, Fresno

Date	*Organization and Meeting*	*Place*
November, 1962		
1	—California Educational Data Processing Association, Annual Meeting	Villa Hotel, San Mateo
1– 3	—California Council on Teacher Education, Fall Conference	Ahwahnee Hotel, Yosemite
2– 3	—California Elementary School Administrators Association, Bay Section Meeting	Santa Rosa
2– 3	—California Industrial Education Association, Executive Council Meeting	Fresno
2– 3	—California Advisory Council on Educational Research and California Teachers Association, Annual State Conference on Education Research	Villa Hotel, San Mateo
2– 4	—Southern California Council of Teachers of English and Orange County Council of Teachers of English, Fall Conference	California State Polytechnic College, San Dimas
3– 4	—California School Health Association, Annual Meeting	Fresno
6	—Election Day	
9–10	—California Elementary School Administrators Association, State Administrative Council Meeting	San Francisco
9–10	—California Junior College Faculty Association, State Council Meeting	Mt. San Antonio College
9–11	—California Council for Adult Education, Fall Conference	Stardust Hotel, San Diego
10	—California Association of Parents of Deaf and Hard of Hearing Children Meeting	California School for the Deaf, Berkeley
11	—Veterans Day	
11–17	—American Education Week	
12–15	—California Congress of Parents and Teachers, Inc., State Board of Managers Meeting	Los Angeles
12–16	—*California Association of Supervisors of Child Welfare and Attendance and California Association for Supervision and Curriculum Development, Annual Conference	San Francisco
16–17	—California Elementary School Administrators Association, Southern Section Meeting	San Diego
16–18	—California Council for Retarded Children, Board Meeting	Monterey
21	—Audio-Visual Education Association of California, South Section, Executive Board Meeting	Long Beach State College
22	—Thanksgiving	
27	—California Association of Secondary School Administrators, Executive Board Meeting	Burlingame
28	—Coordinating Council for Higher Education Meeting	San Francisco
28–30	—*California Association of Adult Education Administrators, Fall Conference	Hotel El Dorado, Sacramento
29–30	—State Board of Education Meeting	San Francisco
December, 1962		
4– 6	—*California Association of School Administrators, Annual Conference	U.S. Grant Hotel, San Diego
5– 8	—California School Boards Association, Annual State Conference	El Cortez Hotel, San Diego

Date	*Organization and Meeting*	*Place*
December, 1962		
7– 8	—California Elementary School Administrators Association, Central Coast Section Meeting	Asilomar
7– 8	—California Teachers Association, State Council of Education Meeting	Ambassador Hotel, Los Angeles
13–15	—Audio-Visual Education Association of California, Northern Section, Annual Conference	Prospector's Village, Oroville
18	—*State Department of Education, Executive Staff Meeting	Sacramento
19	—Coordinating Council for Higher Education Meeting	Los Angeles
25	—Christmas	
January, 1963		
1	—New Year's Day	
4	—California Education Study Council Meeting	Los Angeles
7–10	—California Congress of Parents and Teachers, Inc., State Board of Managers Meeting	San Francisco
11–12	—California Agriculture Teachers Association, Governing Board Meeting	Fresno
11–12	—California Elementary School Administrators Association, State Executive Board Meeting	Palo Alto
19	—California Association of Independent Schools, Bay Area Regional Conference	San Francisco
19	—California Elementary School Administrators Association, Bay Section Meeting	———
25–26	—California Elementary School Administrators Association, North Coast Section Meeting	Eureka
30	—Audio-Visual Education Association of California, Executive Board Meeting	Disneyland Hotel, Anaheim
30	—Coordinating Council for Higher Education Meeting	San Francisco
Jan. 31 to Feb. 2	—Audio-Visual Education Association of California, Annual Conference	Disneyland Hotel, Anaheim
Jan. 31 to Feb. 2	—California Association of Young Homemakers, State Convention	Modesto
Jan. 31 to Feb. 2	—California Young Farmers Association, State Convention	Modesto
February, 1963		
1– 2	—California Elementary School Administrators Association, Central Coast Section Meeting, California Association for Supervision and Curriculum Development	California State Polytechnic College, San Luis Obispo
8	—Conference for California's Exceptional and Rehabilitation Needs	San Francisco
8– 9	—California Elementary School Administrators Association, South Coast Section Meeting	Santa Barbara
9	—California Association of Independent Schools, Bay Area Regional Conference	San Francisco

Date	*Organization and Meeting*	*Place*
February, 1963		
9	—California Association of Independent Schools, Southern California Regional Conference	Pasadena
10–12	—California Counseling and Guidance Association Meeting	Disneyland Hotel, Anaheim
12	—Lincoln's Birthday	
13–16	—American Association of Colleges for Teacher Education, National Convention	———
15–16	—California Industrial Education Association, Executive Council Meeting	Fresno
16	—California Elementary School Administrators Association, Southern Section Meeting	Riverside
16–20	—American Association of School Administrators, Annual National Convention	Atlantic City, New Jersey
22	—Washington's Birthday	
23	—California School Health Association, Southern Section Meeting	Los Angeles
25	—California Education Study Council Meeting	San Francisco
27	—Coordinating Council for Higher Education Meeting	Los Angeles
March, 1963		
1	—California Elementary School Administrators Association, Northern Section Meeting	Redding
2	—California School Health Association, Northern Section Annual Meeting	Santa Rosa
3–6	—Association for Higher Education, National Conference	Chicago, Illinois
8–9	—California Junior College Faculty Association, State Council Meeting	El Mirador Hotel, Sacramento
10–14	—Association for Supervision and Curriculum Development National Convention	St. Louis, Missouri
15–16	—California Industrial Education Association, Annual Conference	San Francisco
16	—California Elementary School Administrators Association, Bay Section Meeting	———
16	—California Elementary School Administrators Association, North Coast Section Meeting	Crescent City
16–17	—California Association for Childhood Education, Annual Conference	Hacienda Hotel, Fresno
18–21	—California Congress of Parents and Teachers, Inc., State Board of Managers Meeting	Los Angeles
24–27	—*California Association of County Superintendents, Spring Conference	Asilomar
28–30	—California Association of School Psychologists and Psychometrists, Annual Conference	Hoberg's
April, 1963		
3–6	—*California Association of Public School Business Officials, Annual State Conference	Hotel del Coronado, Coronado
4–5	—*California Association of Secondary School Curriculum Coordinators, Annual Conference	Los Angeles
4–6	—*California Council on Teacher Education, Spring Conference	Miramar Hotel, Santa Barbara

Date	*Organization and Meeting*	*Place*
April, 1963		
4–6	—Western Business Education Association, Annual Conference	Olympic Hotel, Seattle
5	—California Elementary School Administrators Association, State Administrative Council Meeting	Oakland
5–7	—California Elementary School Administrators Association, State Executive Board Meeting	Oakland
5–8	—California Home Economics Association, Biannual Convention	Coronado
5–9	—California Association for Health, Physical Education, and Recreation, Annual Conference	Long Beach
6–7	—California Association of Secondary School Administrators, Representative Council and Executive Board Meeting	Los Angeles
6–8	—California Business Education Association, State Convention	Fresno
6–9	—California School Food Service Association, Annual Conference	San Jose
7–9	—*California Association of Secondary School Administrators, Annual Conference	Los Angeles
7–10	—*California Elementary School Administrators Association, State Conference	Oakland
8–9	—*California Junior College Association, Spring Conference	Foothill College and San Mateo College
12–13	—California Teachers Association, State Council of Education Meeting	Asilomar
14	—Easter	
16–20	—Council for Exceptional Children, Annual Convention	Philadelphia, Pennsylvania
22–26	—Public Schools Week	
27	—Southern California Junior College Association, Spring Conference	Riverside College
29	—California Education Study Council Meeting	Los Angeles
May, 1963		
1–3	—California Future Farmers Association, State Convention	California State Polytechnic College, San Luis Obispo
3–4	—California Elementary School Administrators Association, Southern, South Coast Section Leadership Conference	Big Bear Lake
3–5	—American Association of School Administrators, Conference of Presidents of State Associations of School Administrators	St. Louis, Missouri
3–5	—Delta Kappa Gamma, State Convention	Hotel Fairmont, San Francisco
4	—California Future Farmers Association, Final Judging Contests	California State Polytechnic College, San Luis Obispo
4–6	—California Council of Geography Teachers, Annual Meeting	San Diego State College
6–7	—California Congress of Parents and Teachers Inc., State Board of Managers Meeting	Los Angeles
10	—Conference for California's Exceptional and Rehabilitation Needs	Los Angeles

Date	*Organization and Meeting*	*Place*
May, 1963		
10–11	—California Elementary School Administrators Association, State Section Plans Conference	Palo Alto
17	—California Association for Childhood Education, Executive Board Meeting	———
17–18	—California Elementary School Administrators Association, Bay Section Leadership Conference	Berkeley
18	—California Elementary School Administrators Association, Southern Section Meeting	———
24	—Audio-Visual Education Association of California, Executive Board Meeting	Hotel Californian, Fresno
24–25	—California Association of Secondary School Administrators, Representative Council and Executive Board Meeting	Burlingame
30	—Memorial Day	
June, 1963		
18–22	—California Agriculture Teachers Association, Summer Skills Week	California State Polytechnic College, San Luis Obispo
24–28	—California Agriculture Teachers Association, Summer Conference	California State Polytechnic College, San Luis Obispo
June 30 to July 5	—National Education Association and Departments, Annual Convention	Detroit, Michigan
July, 1963		
4	—Independence Day	
24–27	—California School Employees Association, Annual Conference	San Diego
August, 1963		
9	—Conference for California's Exceptional and Rehabilitation Needs, Regular Meeting	San Francisco
25–28	—California Teachers Association, Presidents' Seminar	Asilomar

Professional Literature

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* For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

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** Single copies. Discounts on quantity orders. Address Department G, American Legion, Box 1055, Indianapolis 6, Indiana.

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